UNITED STATES PATENT AND TRADEMARK OFFICE

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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _11 July 2005_.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-19 and 30-35_ is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-19 and 30-35_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on _11 July 2005_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☒ All b)☐ Some * c)☐ None of:
      1.☒ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).
      * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _7/11/2005, 5/9/2008_.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-19 and 30-35 are pending in this application. Claims 20-29 have been

canceled as filed on 01 September 2005. Claims 17 and 34 have been amended as

filed on 01 September 2005.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

3.   Claims 17 and 31 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject

matter which applicant regards as the invention.

4.   With respect to Claim 17, the claim recites: "the communications device of claim

1" (Claim 17, line 2). Claim 1 contains multiple communication devices and it is unclear

to which communications device of claim 1 this refers to. Furthermore, Claim 17

recites: "said communications device" (Claim 17, line 6 and 10).   It is also unclear to

which communications device this refers to, "the communications device of claim 1"

(Claim 17, line 2) or "a communications device" (Claim 17, line 3). It is suggested that

applicant import the desired limitations from Claim 1 rather than refer to another

independent claim, as it causes confusion as to the scope of the claim.

5.   Claim 31 recites the limitation "the central control device" in lines 2-3. There is

insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

6.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

7.   Claim 34 is rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

8.   With respect to Claim 34, the claim fails to fall within a statutory category of

invention. It is directed to the program itself, not a process occurring as a result of

executing the program, a machine programmed to operate in accordance with the

program nor a manufacture structurally and functionally interconnected with the

program in a manner which enables the program to act as a computer component and

realize its functionality. It's also clearly not directed to a composition of matter.

Therefore, it's non-statutory under 35 USC 101.

Claim Rejections - 35 USC § 102

9.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by
another filed in the United States before the invention by the applicant for patent or (2) a patent
granted on an application for patent by another filed in the United States before the invention by the
applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

10.   Claims 1, 4, 7, 10-11, 16-19, 30, 32, 34/1, 34/4, 34/7, 34/10 and 34/16 are

rejected under 35 U.S.C. 102(e) as being anticipated by Ho (US 2003/0081547).

11.   With respect to Claim 1, Ho disclosed: "A communications device which is part of

a network system involving multiple communications devices ([0003], lines 1-3) and a

communications network connecting the devices ([0003], lines 1-3),

        said communications device comprising transmit means for transmitting signals

from said communications device to another communications device ([0004], lines 3-7,

specifically where the network can be a wireless Ethernet 802.11 network, in which

wireless devices must transmit signals to communicate),

        said signals being transmitted first in respective communications establish

processes performed between said communications device and the other

communications device so as to establish data communications between said

communications device and the other communications device ([0045], lines 1-14, where

to establish communications between two wireless stations, WSTAs, first there are
signaling instructions sent between the two devices)".

12.   With respect to Claim 4, Ho disclosed: "A communications device which is part of
a network system involving multiple communications devices ([0003], lines 1-3) and a
communications network connecting the devices ([0003], lines 1-3), said
communications device comprising:

        receive means for receiving signals from another communications device ([0004],
lines 4-7, specifically wireless Ethernet IEEE 802.11 networks, where receiving signals
is required to communicate), said signals being transmitted first in respective
communications establish processes performed between said communications device
and the other communications device so as to establish data communications between
said communications device and the other communications device ([0045], lines 1-14,
where to establish communications between two wireless stations, WSTAs, first there
are signaling instructions sent between the two devices); and

        transmit means for transmitting ([0004], lines 4-7, specifically wireless Ethernet
IEEE 802.11 networks, where transmitting signals is required to communicate), to the
other communications device, response signals respectively to said signals which are
transmitted first ([0053], lines 1-6, where a response is used to respond to the initiation
of a traffic stream addition, and [0004], lines 4-7, where the network can be a 802.11
wireless network where communications are transmitted over the air)".

13.   With respect to Claim 7, Ho disclosed: "A communications device which is part of

a network system involving multiple communications devices ([0003], lines 1-3) and a

communications network connecting the devices ([0003], lines 1-3), said

communications device comprising:

        receive means for receiving a first request signal from another communications

device ([0004], lines 4-7, specifically wireless Ethernet IEEE 802.11 networks, where

receiving signals is required to communicate) so as to establish data communications

between said communications device and the other communications device, said first

request signal indicating a request for a first communications establish process ([0045],

lines 1-14, where to establish communications between two wireless stations, WSTAs,

first there are signaling instructions sent between the two devices);

        determine means for determining whether to accept the request in the first

request signal ([0044], lines 4-9 and [0047], lines 5-7 where a hybrid coordinator is

responsible for managing and allocating bandwidth and [0071], lines 21-23, where a

hybrid coordinator determines whether to accept or modify requests); and

        transmit means for transmitting ([0004], lines 4-7, specifically wireless Ethernet

IEEE 802.11 networks, where transmitting signals is required to communicate) a second

request signal indicating a request for a second communications establish process to

the other communications device so as to establish data communications between said

communications device and the other communications device ([0045], lines 1-14, where

to establish communications between two wireless stations, WSTAs, first there are

signaling instructions sent between the two devices, and [0040], lines 1-5, where the source or destination can add a traffic stream),

wherein if the determine means has accepted the request ([0071], lines 21-23, where the hybrid coordinator does not have to modify any QoS parameters, or can accept the request as is), the transmit means transmits the second request signal to the other communications device ([0082], lines 1-10, where an hybrid coordinator transmits a request for the addition of a traffic stream to a wireless station, and it is conceivable the addition of a traffic stream can occur after the hybrid coordinator has accepted a first request from a wireless station)".

14.   With respect to Claim 10, Ho disclosed: "A communications device which is part of a network system involving multiple communications devices ([0003], lines 1-3) and a communications network connecting the devices ([0003], lines 1-3), said communications device comprising:

transmit means for transmitting ([0004], lines 3-7, specifically where the network can be a wireless Ethernet 802.11 network, in which wireless devices must transmit signals to communicate) a request signal indicating a request for a predetermined communications establish process to another communications device so as to establish data communications between said communications device and the other communications device ([0045], lines 1-14, where to establish communications between two wireless stations, WSTAs, first there are signaling instructions sent between the two devices, and [0040], lines 1-5, where the source or destination can add a traffic stream);

receive means for receiving ([0004], lines 3-7, specifically where the network can

be a wireless Ethernet 802.11 network, in which wireless devices must receive signals

to communicate), from the other communications device, a response signal to the

request signal ([0053], lines 1-6);

determine means for determining based on the response signal whether the

predetermined communications establish process has been performed ([0053], lines 6-

14); and

notify means for notifying the other communications device of a determination

made by the determine means ([0071], lines 13-21, where after the response frame is

received, the requested traffic stream is created, thereby notifying the hybrid

coordinator, or other communications device of success)".

15.   With respect to Claim 11, Ho disclosed: "The communications device of claim 10,

wherein:

the other communications device is a central control device ([0041], lines 7-8,

specifically where communicating stations can be a wireless station, or client device,

and a hybrid coordinator, or central control device) for managing a transmission right for

the communications network ([0044], lines 4-9, where the hybrid coordinator, HC or

central control device, allocates appropriate channel bandwidth at appropriate times for

traffic streams);

the data communications are a downlink stream communications from the other

communications device to said communications device ([0041], lines 1-10, specifically

traffic streams unidirectional or bi-directional communication between communicating stations which can be a hybrid coordinator, or central control device, and wireless station, or client device);

the transmit means transmits a request signal ([0050], lines 1-6), as the request signal, indicating a request for a bandwidth information specify process ([0070], lines 19-25 where the wireless station makes a request, which includes QoS parameters which indicate a certain bandwidth); and

the determine means determines whether the bandwidth information specify process has been performed ([0053], lines 6-14)".

16.   With respect to Claim 16, Ho disclosed: "A communications device which is part of a network system involving multiple communications devices ([0003], lines 1-3) and a communications network connecting the devices ([0003], lines 1-3), said communications device comprising:

transmit means ([0004], lines 3-7, specifically where the network can be a wireless Ethernet 802.11 network, in which wireless devices must transmit signals to communicate) for transmitting a first request signal to another communications device so as to establish data communications between said communications device and the other communications device ([0045], lines 1-14, where to establish communications between two wireless stations, WSTAs, first there are signaling instructions sent between the two devices); and

receive means ([0004], lines 4-7, specifically wireless Ethernet IEEE 802.11 networks, where receiving signals is required to communicate) for receiving a second request signal from the other communications device so as to establish data communications between said communications device and the other communications device ([0082], lines 1-4, where an HC can initiate addition of a traffic stream, and it is conceivable that this will happen after the wireless station sent a first request to the HC),

wherein the first request signal indicates information as to whether said communications device is a source or a destination in the data communications ([0050], lines 10-12, specifically source and destination address)".

17.   With respect to Claim 17, Ho disclosed: "A network system, comprising: the communications device of claim 1; and a communications device which is part of a network system involving multiple communications devices ([0003], lines 1-3) and a communications network connecting the devices ([0003], lines 1-3), said communications device comprising:

receive means for receiving signals from another communications device ([0004], lines 4-7, specifically wireless Ethernet IEEE 802.11 networks, where receiving signals is required to communicate), said signals being transmitted first in respective communications establish processes performed between said communications device and the other communications device so as to establish data communications between said communications device and the other communications device ([0082], lines 1-10,

where a hybrid coordinator, or the other communications device, initiates addition of a traffic stream by transmitting a request); and

transmit means for transmitting, to the other communications device ([0004], lines 4-7, specifically wireless Ethernet IEEE 802.11 networks, where transmitting signals is required to communicate), response signals respectively to said signals which are transmitted first ([0083], lines 1-3)".

18.   With respect to Claim 18, Ho disclosed: "A network system, comprising: the communications device of claim 7; and another communications device connected to the communications device over the communications network (Fig 9, and [0087], where there are multiple communications devices on the network)".

19.   With respect to Claim 19, Ho disclosed: "A network system, comprising: the communications device of claim 10; and a central control device ([0041], lines 7-8, specifically where communicating stations can be a wireless station, or client device, and a hybrid coordinator, or central control device), connected to the communications device over the communications network, for managing a transmission right for the communications network ([0044], lines 4-9, where the hybrid coordinator, HC or central control device, allocates appropriate channel bandwidth at appropriate times for traffic streams)".

20.   With respect to Claim 30, Ho disclosed: "The communications device of claim 1,

wherein said signals being transmitted first indicate information based on which the data

communications are established ([0050], lines 1-14, where a request includes QoS

parameters for the requested traffic stream), the information being required when said

one of communications devices acts as any one of a source device, a destination

device, and a central control device for managing a communications right for the

network in the data communications ([0044], lines 4-9, where the central control device,

or hybrid coordinator HC, needs to know the QoS parameters)".

21.   With respect to Claim 32, Ho disclosed: "The communications device of claim 4,

the response signal indicating information being required when said one of

communications device acts as any one of a source device, destination, and a central

control device managing a communications right for the network in the data

communications ([0044], lines 4-9, where the central control device, or hybrid

coordinator HC, needs to know the QoS parameters), the information enabling

establishment of the data communications ([0045], lines 1-2, where signaling

instructions create traffic streams)".

22.   With respect to Claims 34/1, 34/4, 34/7, 34/10 and 34/16, Ho disclosed: "A

computer program causing a computer to function as the means of the communications

device of any one of claims 1, 4, 7, 10, or 16 ([0007], lines 10-12, where a file transfer

occurs between two computers, and a computer program causes the computer to

transfer the file)".

Claim Rejections - 35 USC § 103

23.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

24.   Claims 2-3, 5-6, 8-9, 31 and 33 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Ho in view of Benveniste (US 2004/0002357).

25.   With respect to Claim 2, Ho disclosed: "The communications device of claim 1,

wherein:

        the other communications device is a central control device ([0041], lines 7-8,

specifically where communicating stations can be a wireless station, or client device,

and a hybrid coordinator, or central control device) for managing a transmission right for

the communications network ([0044], lines 4-9, where the hybrid coordinator, HC or

central control device, allocates appropriate channel bandwidth at appropriate times for

traffic streams);

        the data communications are a downlink stream communications from the other

communications device to said communications device ([0041], lines 1-10, specifically

traffic streams unidirectional or bi-directional communication between communicating

stations which can be a hybrid coordinator, or central control device, and wireless

station, or client device); and

the transmit means transmits a request signal, as said signals, to the other

communications device ([0050], lines 1-6), the request signal indicating a request for an

ACK information specify process related to ACK to establish the downlink stream

communications (Fig 3a and [0050], lines 1-6 and 10-14, where the request includes a

TRAFFIC SPECIFICATION field, which according to Fig 6a and [0074], lines 1-3 and

14-15 specifically a TS Info field, which in reference to Fig 6b and [0075], lines 1-3 and

9-10, specifically ACK policy field)".

Ho did not explicitly state: "group ACK type".

However Benveniste disclosed: "group ACK type ([0047], where

acknowledgement policy can include no acknowledgements or acknowledgements for

multiple frames)"

One of ordinary skill in the art at the time of the invention would have been

motivated to combine Ho and Benveniste since Ho disclosed teachings of wireless

network communications using 802.11. Benveniste disclosed wireless network

communications using 802.11.

Therefore, it would have been obvious to one of ordinary skill in the art at the

time of the invention to modify the wireless communications system of Ho with the

teachings of Benveniste to include support for group ACK. Motivation to combine these

comes from Benveniste disclosing more detail than Ho, Ho mentions an ACK policy that

is 2 bits long (see Ho, [0075], lines 9-10) but does not specifically state what possible

ACK policies could be. Benveniste discloses possible ACK policies with regards to

802.11 networks as including no ACK, multiple frame or group ACKs, (see Benveniste,

[0047], lines 5-11). By using a group ACK policy there is less overhead because every

frame does not need to be acknowledged when it is received, but rather multiple frames

can be acknowledged at the same time.

26.   With respect to Claim 3, the combination of Ho and Benveniste disclosed: "The

communications device of claim 2, wherein the request signal also indicates information

on a group ACK type desired by said communications device (Ho, Fig 3a and [0050],

lines 1-6 and 10-14, where the request includes a TRAFFIC SPECIFICATION field,

which according to Fig 6a and [0074], lines 1-3 and 14-15 specifically a TS Info field,

which in reference to Fig 6b and [0075], lines 1-3 and 9-10, specifically ACK policy field

and Benveniste, [0047], where acknowledgement policy can include no

acknowledgements or acknowledgements for multiple frames) and information on a

stream receive buffer size in said communications device (Ho, [0089], lines 4-7, where

TCP/IP is used and it is well known in the art that TCP headers contain a window size

which specifies the amount of data which the sender is willing to accept, or in other

words information on a receive buffer size in said communications device)".

27.   With respect to Claim 5, Ho disclosed: "The communications device of claim 4,

wherein:

said communications device is a device for managing a transmission right for the

communications network ([0044], lines 4-9, where the hybrid coordinator, HC or central

control device, allocates appropriate channel bandwidth at appropriate times for traffic

streams);

the data communications is a downlink stream communications from said

communications device to the other communications device ([0041], lines 1-10,

specifically traffic streams unidirectional or bi-directional communication between

communicating stations which can be a hybrid coordinator, or central control device,

and wireless station, or client device); and

the receive means receives a request signal, as said signals, from the other

communications device ([0050], lines 1-6), the request signal indicating a request for an

ACK information specify process related to ACK to establish the downlink stream

communications (Fig 3a and [0050], lines 1-6 and 10-14, where the request includes a

TRAFFIC SPECIFICATION field, which according to Fig 6a and [0074], lines 1-3 and

14-15 specifically a TS Info field, which in reference to Fig 6b and [0075], lines 1-3 and

9-10, specifically ACK policy field)".

Ho did not explicitly state: "group ACK".

However Benveniste disclosed: "group ACK ([0047], where acknowledgement

policy can include no acknowledgements or acknowledgements for multiple frames)"

One of ordinary skill in the art at the time of the invention would have been

motivated to combine Ho and Benveniste since Ho disclosed teachings of wireless

network communications using 802.11. Benveniste disclosed wireless network

communications using 802.11.

        Therefore, it would have been obvious to one of ordinary skill in the art at the

time of the invention to modify the wireless communications system of Ho with the

teachings of Benveniste to include support for group ACK. Motivation to combine these

comes from Benveniste disclosing more detail than Ho, Ho mentions an ACK policy that

is 2 bits long (see Ho, [0075], lines 9-10) but does not specifically state what possible

ACK policies could be. Benveniste discloses possible ACK policies with regards to

802.11 networks as including no ACK, multiple frame or group ACKs, (see Benveniste,

[0047], lines 5-11). By using a group ACK policy there is less overhead because every

frame does not need to be acknowledged when it is received, but rather multiple frames

can be acknowledged at the same time.

28.   With respect to Claim 6, the combination of Ho and Benveniste disclosed: "The

communications device of claim 5, wherein the response signals also indicate

information on a group ACK type desired by said communications device (Ho, Fig 3d

and [0053], lines 1-6 and 14-15, where the response includes a traffic specification field

336, which according to Fig 6a and [0074], lines 1-3 and 14-15 specifically a TS Info

field, which in reference to Fig 6b and [0075], lines 1-3 and 9-10, specifically ACK policy

field and Benveniste, [0047], where acknowledgement policy can include no

acknowledgements or acknowledgements for multiple frames) and information on a

stream transmit buffer size in said communications device (Ho, [0089], lines 4-7, where

TCP/IP is used and it is well known in the art that TCP headers contain a window size which specifies the amount of data which the sender is willing to accept, or in other words information on a receive buffer size in said communications device)".

29.   With respect to Claim 8, Ho disclosed: "The communications device of claim 7, wherein:

said communications device is a device for managing a transmission right for the communications network ([0044], lines 4-9, where the hybrid coordinator, HC or central control device, allocates appropriate channel bandwidth at appropriate times for traffic streams);

the data communications is a downlink stream communications from the other communications device to said communications device ([0041], lines 1-10, specifically traffic streams unidirectional or bi-directional communication between communicating stations which can be a hybrid coordinator, or central control device, and wireless station, or client device);

the receive means receives a request signal ([0050], lines 1-6), as the first request signal, indicating a request for a bandwidth information specify process ([0070], lines 19-25 where the wireless station makes a request, which includes QoS parameters which indicate a certain bandwidth); and

the transmit means transmits a request signal ([0082], lines 1-10 where an hybrid coordinator initiates an addition of a traffic stream by transmitting a request to a wireless station), as the second request signal, indicating a request for an ACK information

specify process related to ACK (Fig 3a and [0050], lines 1-6 and 10-14, where the request includes a TRAFFIC SPECIFICATION field, which according to Fig 6a and [0074], lines 1-3 and 14-15 specifically a TS Info field, which in reference to Fig 6b and [0075], lines 1-3 and 9-10, specifically ACK policy field)".

Ho did not explicitly state: "group ACK".

However Benveniste disclosed: "group ACK ([0047], where acknowledgement policy can include no acknowledgements or acknowledgements for multiple frames)"

One of ordinary skill in the art at the time of the invention would have been motivated to combine Ho and Benveniste since Ho disclosed teachings of wireless network communications using 802.11. Benveniste disclosed wireless network communications using 802.11.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the wireless communications system of Ho with the teachings of Benveniste to include support for group ACK. Motivation to combine these comes from Benveniste disclosing more detail than Ho, Ho mentions an ACK policy that is 2 bits long (see Ho, [0075], lines 9-10) but does not specifically state what possible ACK policies could be. Benveniste discloses possible ACK policies with regards to 802.11 networks as including no ACK, multiple frame or group ACKs, (see Benveniste, [0047], lines 5-11). By using a group ACK policy there is less overhead because every frame does not need to be acknowledged when it is received, but rather multiple frames can be acknowledged at the same time.

30.   With respect to Claim 9, the combination of Ho and Benveniste disclosed: "The

communications device of claim 8, further comprising:

a MAC sublayer (Ho, [0010], lines 8-9, where a first communications station

includes a MAC sublayer) for transmitting a request signal (Ho, [0066], lines 10-16)

indicating a request that the other communications device specify ACK information

related to group ACK (Ho, Fig 3a and [0050], lines 1-6 and 10-14, where the request

includes a TRAFFIC SPECIFICATION field, which according to Fig 6a and [0074], lines

1-3 and 14-15 specifically a TS Info field, which in reference to Fig 6b and [0075], lines

1-3 and 9-10, specifically ACK policy field and Benveniste, [0047], where

acknowledgement policy can include no acknowledgements or acknowledgements for

multiple frames); and

a management layer (Ho, [0010], line 6, station management entity or SME),

provided with the determine means (Ho, [0040], lines 1-5, where traffic streams are

added modified and deleted by using QoS action primitives issued by a SME and

[0070], lines 19-25, where the hybrid coordinator makes a QoS action response

accepting or modifying QoS parameters for the addition of a traffic stream), for

managing the MAC sublayer (Ho, [0040], lines 8-12),

wherein if the determine means has accepted the request ([0071], lines 21-23,

where the hybrid coordinator does not have to modify any QoS parameters, or can

accept the request as is), the management layer issues an instruction to the MAC

sublayer ([0082], lines 4-6) to transmit a request signal ([0082], lines 1-10, where an

hybrid coordinator transmits a request for the addition of a traffic stream to a wireless

station, and it is conceivable the addition of a traffic stream can occur after the hybrid

coordinator has accepted a first request from a wireless station) indicating a request for

specification of the ACK information related to group ACK (Ho, Fig 3a and [0050], lines

1-6 and 10-14, where the request includes a TRAFFIC SPECIFICATION field, which

according to Fig 6a and [0074], lines 1-3 and 14-15 specifically a TS Info field, which in

reference to Fig 6b and [0075], lines 1-3 and 9-10, specifically ACK policy field and

Benveniste, [0047], where acknowledgement policy can include no acknowledgements

or acknowledgements for multiple frames)".

31.   With respect to Claim 31, Ho disclosed: "The communications device of claim 1,

wherein: said signals being transmitted first are transmitted from the at least one

communications device to the central control device for managing the network ([0041],

lines 7-8, where the communicating stations can be a wireless station and a hybrid

coordinator, or central control device), and are request signals enabling establishment

of downlink stream communications from the central control device to the at least one

communications device ([0050], lines 1-6); and said signals being transmitted first

indicate information being required so that the at least one communications device

which is a destination of streaming data specifies ACK information related to ACK (Fig

3a and [0050], lines 1-6 and 10-14, where the request includes a TRAFFIC

SPECIFICATION field, which according to Fig 6a and [0074], lines 1-3 and 14-15

specifically a TS Info field, which in reference to Fig 6b and [0075], lines 1-3 and 9-10,

specifically ACK policy field)".

Ho did not explicitly state: "group ACK".

However Benveniste disclosed: "group ACK ([0047], where acknowledgement policy can include no acknowledgements or acknowledgements for multiple frames)"

One of ordinary skill in the art at the time of the invention would have been motivated to combine Ho and Benveniste since Ho disclosed teachings of wireless network communications using 802.11. Benveniste disclosed wireless network communications using 802.11.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the wireless communications system of Ho with the teachings of Benveniste to include support for group ACK. Motivation to combine these comes from Benveniste disclosing more detail than Ho, Ho mentions an ACK policy that is 2 bits long (see Ho, [0075], lines 9-10) but does not specifically state what possible ACK policies could be. Benveniste discloses possible ACK policies with regards to 802.11 networks as including no ACK, multiple frame or group ACKs, (see Benveniste, [0047], lines 5-11). By using a group ACK policy there is less overhead because every frame does not need to be acknowledged when it is received, but rather multiple frames can be acknowledged at the same time.

32.   With respect to Claim 33, Ho disclosed: "The communications device of claims 4, the response signal being made in response to a request signal enabling establishment of downlink stream communications from the central device to the at least one

communications device ([0070], lines 14-21), the response signal indicating information

enabling the central control device which is a source of streaming data to specify ACK

information related to ACK (Fig 3d and [0053], lines 1-6 and 14-15, where the response

includes a traffic specification field 336, which according to Fig 6a and [0074], lines 1-3

and 14-15 specifically a TS Info field, which in reference to Fig 6b and [0075], lines 1-3

and 9-10, specifically ACK policy field)".

Ho did not explicitly state "group ACK".

However, Benveniste disclosed: "group ACK ([0047], where acknowledgement

policy can include no acknowledgements or acknowledgements for multiple frames)"

One of ordinary skill in the art at the time of the invention would have been

motivated to combine Ho and Benveniste since Ho disclosed teachings of wireless

network communications using 802.11. Benveniste disclosed wireless network

communications using 802.11.

Therefore, it would have been obvious to one of ordinary skill in the art at the

time of the invention to modify the wireless communications system of Ho with the

teachings of Benveniste to include support for group ACK. Motivation to combine these

comes from Benveniste disclosing more detail than Ho, Ho mentions an ACK policy that

is 2 bits long (see Ho, [0075], lines 9-10) but does not specifically state what possible

ACK policies could be. Benveniste discloses possible ACK policies with regards to

802.11 networks as including no ACK, multiple frame or group ACKs, (see Benveniste,

[0047], lines 5-11). By using a group ACK policy there is less overhead because every

frame does not need to be acknowledged when it is received, but rather multiple frames

can be acknowledged at the same time.

33.   Claims 12-13, 34/12 and 34/13 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Ho in view of Gubbi (US 6,865,609 B1).

34.   With respect to Claim 12, Ho disclosed: "A communications device which is part

of a network system involving multiple communications devices ([0003], lines 1-3) and a

communications network connecting the devices ([0003], lines 1-3), said

communications device comprising:

        receive means for receiving a request signal from another communications

device ([0004], lines 4-7, specifically wireless Ethernet IEEE 802.11 networks, where

receiving signals is required to communicate) so as to establish data communications

between said communications device and the other communications device, the request

signal indicating a request for a communications establish process which includes a

process of specifying predetermined information ([0045], lines 1-14, where to establish

communications between two wireless stations, WSTAs, first there are signaling

instructions sent between the two devices, and where predetermined information

includes QoS parameters for the data communications); and

        said communications device transmits a response signal indicating the

predetermined information to the other communications device so as to establish data

communications between said communications device and the other communications

device ([0083], lines 1-6, where the wireless station generates an ACK of the request frame received from the higher priority HC)".

Ho did not explicitly state: "compare means for comparing said communications device with the other communications device in priority on the basis of the request signal wherein if the other communications device has higher priority"

However, Gubbi disclosed: "compare means for comparing said communications device with the other communications device in priority on the basis of the request signal (Col. 14, lines 60 – Col. 15, line 3, where communications devices are compared to determine which device has priority)

wherein if the other communications device has higher priority (Col. 15, lines 2-3, where the device with the largest MAC is selected as having higher priority, and it is conceivable that the other communications device has a larger MAC and therefore a higher priority)".

One of ordinary skill in the art at the time of the invention would have been motivated to combine Ho and Gubbi since Ho disclosed teachings of wireless network communications using 802.11. Gubbi disclosed wireless network communications using 802.11.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the wireless communications system of Ho with the teachings of Gubbi to include support for comparing priority of devices. Motivation to combine these comes from Gubbi, where "In any network architecture based on

coordinator-station relations, it is very important to have backups to account for the
failure of the coordinator" (Col. 14, lines 41-43). When the coordinator fails a backup
will take its place, and to determine which station is to become the new coordinator, a
method of assigning priority is used. Therefore, by combining the references, in the
event of a failure of the coordinator, the network can assign a backup and keep
functioning.

35.   With respect to Claim 13, Ho disclosed: "A communications device which is part
of a network system involving multiple communications devices ([0003], lines 1-3) and a
communications network connecting the devices ([0003], lines 1-3), said
communications device comprising:

        receive means for receiving a request signal from another communications
device ([0004], lines 4-7, specifically wireless Ethernet IEEE 802.11 networks, where
receiving signals is required to communicate) so as to establish data communications
between said communications device and the other communications device, the request
signal indicating a request for a communications establish process which includes a
process of specifying predetermined information ([0045], lines 1-14, where to establish
communications between two wireless stations, WSTAs, first there are signaling
instructions sent between the two devices, and where predetermined information
includes QoS parameters for the data communications)", and

        "said communications device transmits a response signal to the other
communications device so as to establish data communications between said

communications device and the other communications device ([0070], lines 14-19), the
response signal including a process of specifying information specified by said
communications device ([0070], lines 19-28)".

Ho did not explicitly state: "compare means for comparing said communications
device with the other communications device in priority on the basis of the request
signal wherein if said communications device has higher priority"

However, Gubbi disclosed: "compare means for comparing said communications
device with the other communications device in priority on the basis of the request
signal (Col. 14, lines 60 – Col. 15, line 3, where communications devices are compared
to determine which device has priority) wherein if said communications device has a
higher priority (Col. 15, lines 2-3, where the device with the largest MAC is selected as
having higher priority, and it is conceivable that said communications device has a
larger MAC and therefore a higher priority)".

One of ordinary skill in the art at the time of the invention would have been
motivated to combine Ho and Gubbi since Ho disclosed teachings of wireless network
communications using 802.11. Gubbi disclosed wireless network communications
using 802.11.

Therefore, it would have been obvious to one of ordinary skill in the art at the
time of the invention to modify the wireless communications system of Ho with the
teachings of Gubbi to include support for comparing priority of devices. Motivation to
combine these comes from Gubbi, where "In any network architecture based on

coordinator-station relations, it is very important to have backups to account for the
failure of the coordinator" (Col. 14, lines 41-43). When the coordinator fails a backup
will take its place, and to determine which station is to become the new coordinator, a
method of assigning priority is used. Therefore, by combining the references, in the
event of a failure of the coordinator, the network can assign a backup and keep
functioning.

36.   With respect to Claims 34/12 and 34/13, the combination of Ho and Gubbi
disclosed: "A computer program causing a computer to function as the means of the
communications device of any one of claims 12 or 13 (Ho, [0007], lines 10-12, where a
file transfer occurs between two computers, and a computer program causes the
computer to transfer the file)".

37.   **Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ho
in view of Gubbi, and further in view of Benveniste.**

38.   With respect to Claim 14, the combination of Ho and Gubbi disclosed: "The
communications device of claim 12 wherein: the communications establish process is
an ACK information specify process related to ACK; and the request signal includes
information on ACK type (Ho, Fig 3a and [0050], lines 1-6 and 10-14, where the request
includes a TRAFFIC SPECIFICATION field, which according to Fig 6a and [0074], lines

1-3 and 14-15 specifically a TS Info field, which in reference to Fig 6b and [0075], lines

1-3 and 9-10, specifically ACK policy field)".

The combination of Ho and Gubbi did not explicitly state: "group ACK".

However Benveniste disclosed: "group ACK ([0047], where acknowledgement

policy can include no acknowledgements or acknowledgements for multiple frames)"

One of ordinary skill in the art at the time of the invention would have been

motivated to combine Ho and Gubbi with Benveniste since the combination of Ho and

Gubbi disclosed teachings of wireless network communications using 802.11.

Benveniste disclosed wireless network communications using 802.11.

Therefore, it would have been obvious to one of ordinary skill in the art at the

time of the invention to modify the wireless communications system of Ho and Gubbi

with the teachings of Benveniste to include support for group ACK. Motivation to

combine these comes from Benveniste disclosing more detail than Ho or Gubbi, Ho

mentions an ACK policy that is 2 bits long (see Ho, [0075], lines 9-10) but does not

specifically state what possible ACK policies could be. Benveniste discloses possible

ACK policies with regards to 802.11 networks as including no ACK, multiple frame or

group ACKs, (see Benveniste, [0047], lines 5-11). By using a group ACK policy there is

less overhead because every frame does not need to be acknowledged when it is

received, but rather multiple frames can be acknowledged at the same time.

39.   **Claims 15 and 35/34/12 and 35/34/13 are rejected under 35 U.S.C. 103(a) as**

being unpatentable over Ho in view of Gubbi, and further in view of Border (US

6,993,584 B2).

40.   With respect to Claim 15, the combination of Ho and Gubbi disclosed: "The

communications device of claim 12, wherein: the request signal includes information as

to whether the other communications device from which the request signal originates is

a source or a destination in the data communications (Ho, [0050], lines 10-12,

specifically source and destination addresses);

        The combination of Ho and Gubbi did not explicitly state: "the priority is

determined based on whether the other communications device from which the request

signal originates is a source or a destination in the data communications".

        However, Border disclosed: "the priority is determined based on whether the

other communications device from which the request signal originates is a source or a

destination in the data communications (Col. 10, lines 15-17, where information used to

determine priority can include destination and source address)"

        One of ordinary skill in the art at the time of the invention would have been

motivated to combine Ho and Gubbi with Border since the combination of Ho and Gubbi

disclosed teachings of wireless network communications using wireless networks.

Border disclosed wireless network communications.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the wireless communications system of Ho and Gubbi with the teachings of Border to include support for priority determination based on source/destination. Motivation to combine these comes from Border, where "The PK 284 provides prioritized access to the backbone link capacity. For example, the backbone connection can actually be divided into N (N>1) different sub-connections, each having a different priority level. In one exemplary embodiment, four priority levels can be supported. The PK 284 uses user-defined rules to assign different priorities, and therefore different sub-connections of the backbone connection, to different TCP connections" (Col. 10, lines 1-8). Therefore by combining the references, one can assign priority based on user generated rules.

41.   With respect to Claim 35/34/12,13, the combination of Ho and Gubbi did not explicitly state: "A storage medium containing the computer program of claim 34".

However, Border disclosed: "A storage medium containing the computer program of claim 34 (Col. 24, lines 38-42)"

One of ordinary skill in the art at the time of the invention would have been motivated to combine Ho and Gubbi with Border since Ho and Gubbi disclosed teachings of wireless network communications using wireless networks. Border disclosed wireless network communications.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the wireless communications system of Ho in view of

Gubbi with the teachings of Border to include support for storing computer programs.

Motivation to combine these comes from Border, where "Computer system also

includes a main memory 1707, such as random access memory (RAM) or other

dynamic storage device, coupled to bus 1703 for storing information and instructions to

be executed by the processor 1705" (Col. 24, lines 38-42). Therefore by combining the

references, one can store information and instructions to be executed by the processor.

42.   Claims 35/34/1, 35/34/4, 35/34/7, 35/34/10 and 35/34/16 are rejected under 35

U.S.C. 103(a) as being unpatentable over Ho in view of Border.

43.   With respect to Claims 35/34/1, 35/34/4, 35/34/7, 35/34/10, and 35/34/16, Ho did

not explicitly state: "A storage medium containing the computer program of claim 34".

However, Border disclosed: "A storage medium containing the computer program

of claim 34 (Col. 24, lines 38-42)"

One of ordinary skill in the art at the time of the invention would have been

motivated to combine Ho with Border since Ho disclosed teachings of wireless network

communications using wireless networks. Border disclosed wireless network

communications.

Therefore, it would have been obvious to one of ordinary skill in the art at the

time of the invention to modify the wireless communications system of Ho with the

teachings of Border to include support for storing computer programs. Motivation to

combine these comes from Border, where "Computer system also includes a main

memory 1707, such as random access memory (RAM) or other dynamic storage

device, coupled to bus 1703 for storing information and instructions to be executed by

the processor 1705" (Col. 24, lines 38-42). Therefore by combining the references, one

can store information and instructions to be executed by the processor.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to **MATTHEW S. LINDSEY** whose telephone number is

(571)270-3811. The examiner can normally be reached on Mon-Thurs 7-5, Fridays 7-

12.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

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MSL
7/16/2008

/J. Bret Dennison/
Examiner, Art Unit 2143